

CLAIMS

1. An exhaust emission control device comprising a plurality of capturing cells each including a cylindrical outer electrode constituted by an electrically conductive filter capable of capturing particulates, a rod-like inner electrode inserted into the outer electrode and a dielectric for lining an outer surface of the inner electrode, a cylindrical housing within which said capturing cells are arranged in parallel with each other, exhaust divergence means on one end of the housing and in communication with interiors of the outer electrodes in the respective capturing cells and exhaust convergence means on the other end of the housing and in communication with a gap between an inner surface of the housing and outer surfaces of the respective capturing cells, voltage necessary for generation of electric discharge being applicable across the inner and outer electrodes.

2. An exhaust emission control device comprising a plurality of capturing cells each including a cylindrical inner electrode constituted by an electrically conductive filter capable of capturing particulates, a cylindrical outer electrode surrounding said inner electrode and a dielectric for lining an inner surface of the outer electrode, a cylindrical housing within which said

capturing cells are arranged in parallel with each other, exhaust divergence means on one end of the housing and in communication with a gap between an inner surface of the dielectric and an outer surface of the inner electrode in each of the capturing cells, exhaust convergence means on the other end of the housing and in communication with an interior of the inner electrode in each of the capturing cells, voltage necessary for generation of electric discharge being applicable across the inner and outer electrodes.

3. An exhaust emission control device comprising a plurality of capturing cells each including a cylindrical inner electrode constituted by an electrically conductive filter capable of capturing particulates, a cylindrical dielectric surrounding said inner electrode and a cylindrical outer electrode constituted by an electrically conductive filter capable of capturing particulates and surrounding said dielectric, a cylindrical housing within which said capturing cells are arranged in parallel with each other, exhaust divergence means on one end of the housing and in communication with a gap between an inner surface of the dielectric and an outer surface of the inner electrode in each of the capturing cells and a gap between an inner surface of the outer electrode and an

outer surface of the dielectric in each of the capturing cells and exhaust convergence means on the other end of the housing and in communication with an interior of the inner electrode in each of the capturing cells, voltage necessary for generation of electric discharge being applicable across the inner and outer electrodes.